

## COMMITTEE MUST BEAR ITS SHARE

Direct Responsibility for Flume Collapse Soon to Be Placed by Experts.

INSPECTOR CLIFTON NEXT

Investigation to Continue When He Returns Here from North Carolina.

While the investigation of the failure of the settling basin flume is far from complete, the admissions by witnesses show a state of affairs which reflects not only on those employed in the erection of the flume, but on the Water Committee and the City Council. It is well known that the political campaign material could be desired by an independent or reform move in municipal politics than the manner in which the scheme of sedimentation of city water has been bungled.

No evidence has as yet been introduced before the investigating committee to show that the designs were faulty, no expert concrete engineers having been put in the witness chair. So far the essential feature of the inquiry has been that there was no responsibility for the erection of the flume under the system of government which now obtains in Richmond. The Council appropriated nearly a half million dollars for the basin and flume, provided by a bond issue, on which the taxpayers are paying interest, and will one day have to meet the principal, leaving the details of erection to the Council Committee on Water. The Water Committee left it to the engineering and the department, apparently without effort to check his work. He trusted his subordinates, and now finds that they were either inefficient or incompetent, or else did not understand the responsibilities of the position with which they were intrusted. Whatever may be the legal situation as to responsibility, the public mind will hardly blame the contractor for poor work when there were three men employed by the city to supervise that work, and not one of the three, according to their own testimony, ever interposed any objection or criticized any of the material or workmanship.

Inspectors Without Experience.

Mr. Charles Mann, the concrete inspector, son of the former chairman of the Water Committee, on the witness stand and under sworn testimony, admitted that he had no experience in reinforced concrete; that he was often taken away to other work for as much as one day a week, with no substitute during his absence to watch the mixing of the concrete; that for the first two months he had no instructions other than to mix the first 200 feet or more of the flume having been laid and tamped without any inspection whatever.

Mr. Mann, on cross-questioning, showed an entire ignorance of the specifications. On the whole, his testimony favorably impressed members of the committee, who stated after adjournment that he had apparently done all he had been instructed to do, and had told a straight story, which cross-examination had failed to shake.

Evidence shows that Mr. Richard Bolling, the engineer in charge, and brother of City Engineer Charles E. Bolling, was only on the works a few hours a day, Mr. Mann going so far as to testify that he was only there once or twice a week, and that he never saw him making any inspection of the flume. Mr. Bolling himself said he was often not there for days at a time; that he had had no experience in reinforced concrete; that he allowed departures from the plans without protest and without report, trusting everything to the contractor, and hoping that the flume, when completed, would "be a credit to him."

Mr. Clifton, the third inspector, has not yet appeared to testify, being absent on an engineering expedition to a remote point in North Carolina. His evidence will go far to settle points in which the witnesses up to this time are in conflict. It is in evidence that Mr. Clifton seldom came to the works;



### Words Fail Us

To express the distinctiveness and diversity of our Suits and Overcoats. We're proud of 'em as a father handling his first born on his knee.

A better, brighter gathering isn't to be found between here and New York.

For this week we offer two VERY Specials:

Our \$22.50, \$20 and \$18 Suits, 15.

Our \$22.50, \$20 and \$18 O'Coats \$15.

For your holiday gift we suggest:

Smoking Jackets \$3.50 to \$18.

Bath Robes \$5 to \$10.

Fancy Silk Vests \$2.50 to \$6.

Handkerchiefs \$1.50 per box of six. Your laundry initial.

Neckwear 25c to \$2.

## Jacobs & Levy

In fact, that he only came with Mr. Richard Bolling, when the contractor was ready for an extension of the work, when the two engineers gave the lines and grades, staked off the route and left for the city. Current rumor has it that the engineers, when they went to the flume, saw by the return about midday by way of the Reservoir.

Mr. Bolling's Admissions.

City Engineer Charles E. Bolling made a distinctly good impression on the witness stand, telling a candid story without attempt to shirk responsibility. He frankly admitted having plans and specifications for monolith work. In the details of construction Mr. Charles Bolling trusted implicitly to his subordinates, being at that time superintendent of the Water Works, and having the details of the operation of the department in his hands. It is in evidence that he went to the works two or three times a week, usually in the afternoon, and according to his own statement, he at no time saw the reinforcement tied, nor did he inquire from his subordinates as to whether the regular tying was being required.

Through some singular misunderstanding, neither of the assistants who were to be any thing at all, and what tying of the reinforcements was done seems to have been entirely on the suggestion of the foreman, who may or may not have had his doubts as to the strength of the flume. It has not been shown as yet whether the contractor, the Crouse Construction Company, kept an engineer on the job all the time or not. An effort will be made to bring the foreman here to testify before the investigating committee.

Flexible Reinforcement.

The use of wire or flexible reinforcement must be regarded as experimental, to say the least. Evidence shows that the cement was tested by chemist, and was presumably of standard quality. Experienced handlers of concrete say that no stronger proportion than the one-three-four mixture could be made, if properly mixed and tamped, with clean sand and rock of the regulation size. The evidence does not show that any material was rejected or removed from the works.

In the final analysis the responsibility must rest on the Committee on Water, placed in charge of the expenditure of nearly \$500,000 by the City Council, each member being under oath to do his duty by the city. So far as the minutes show, the Water Committee, after two years of haggling over bids, in which lot after lot was rejected, without any reason being given,



### Your Boy's Stocking

Will be just as well filled this year as last, but 'twill hold less "gingerbready" gifts.

Toys Bring No Joys.

"Crack!" and they are broken. "Snap!" and they're ready for the ashman.

But presents like these confer pleasure in the giving and delight in the receiving.

For this week Boys' Suits, plain or Knick. Trousers, Buster or Russian blouse—

\$4.00 and \$7.00 grades, \$4.50.

\$4.00 and \$5.00 grades, \$2.95.

Reckers, \$2.00 to \$3.00.

Sweaters, 50c to \$1.50.

Hats, Caps, 25c to \$2.00.

Boys' Long Overcoats, \$10.00, \$8.00 and \$7.00 grades, \$4.50.

signed the flume contract and turned the work over to the superintendent. At the monthly meetings, along with a mass of small matters, such as granting free water or making pipe extensions to the property of some favored citizen, the minutes show that payments to the flume contractor were ordered as the work progressed. It was taken strictly on the number of linear feet, without regard or inquiry as to quality, the bill being paid for any kind of a flume at so much per foot.

The periodical inspection tours amounted to little more than an afternoon stroll up the canal bank, with a lunch at the pump-house, when the chairman of the Water Committee entertained the other members and a number of city officials.

The whole situation affords a striking, if somewhat expensive, exhibition of the results obtained by a divided responsibility, such as is provided under the present system of government. Although more than \$4,000 was spent for inspection, the work took its time unhurried, a contract to be executed in four months occupying over two years, while salaries continued and interest charges accumulated. The net result of the time and outlay is a hopeless failure—a mere obstruction in the way of a new flume. Beyond lies the untested settling basin, on which hundreds of thousands are being spent, and from which not a drop of clear water has been received, though five years' interest has been paid on the bonds, and the contractor has received his money and been relieved from any responsibility.

### HARD TO LOCATE CLIFTON

Flume Inspectors Meet This Week If He Can Be Found—Other Meetings.

Another meeting of the Flume Investigating Committee will be held this week if it is possible to locate Inspector J. C. Clifton, who has been repeatedly summoned, but being absent from the city, he cannot appear. The committee has been repeatedly summoned, but being absent from the city, he cannot appear. The committee has been repeatedly summoned, but being absent from the city, he cannot appear.

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## CHEMIST CLUB MAY JOIN NATIONAL ORDER

Question of Forming Section of American Society to Be Decided at Next Meeting—Dr. Carpenter Traces History of Commercial Fertilizers.

The Virginia Chemist Club held its regular monthly meeting in the Mechanics Institute Friday night, President E. C. Bingham presiding.

There was a very good attendance of chemists present, and after the preliminary routine business the history of the committee appointed at the last meeting to investigate the desirability of the Virginia Chemist Club forming a Virginia section of the American Chemical Society was made by Dr. E. W. Magruder, chairman of the committee, on behalf of himself and Dr. F. B. Carpenter and Mr. A. M. Forester. The committee reported that there are forty-two members of the American Chemical Society in Virginia, and that they had heard from twenty-eight of that number, all of whom were favorably toward forming a Virginia section of the society, and that they (the committee) were themselves heartily in favor of urging the Virginia Chemist Club into the Virginia Section of the American Chemical Society, up to the point of forming a section, and that the same committee be continued and instructed to take all preliminary steps to form such a section, and to communicate with all of the Chemist Club who would be associate members of the new organization and get their views on the subject, and report at the next meeting, when, if it was then voted to form the section, no time would be lost in doing so.

Fertilizer Development.

Dr. F. B. Carpenter, chief chemist of the Virginia-Carolina Chemical Company, made an address on "The Development of the Fertilizer Industry." His remarks in part were as follows: "The fertilizer industry is so intimately associated and so largely dependent on the science of chemistry for its existence that it seems fitting at this time to review briefly the remarkable growth of the fertilizer industry, and the one which has been the greatest advance in agriculture, the noble calling which, in reality, is the foundation of all industry and wealth."

One of the chief aims in agriculture is to produce certain plants which serve to feed, clothe, or otherwise contribute to the welfare of the human race, and a history of the fertilizer industry is a part of the record of what man has done to assist nature in the production of plant life.

The science of chemistry has played a most important part in building up vast industries, which are dependent upon the products of the soil, but perhaps no service has been so much valued to agriculture as that which has caused the development of the fertilizer industries of the world. The chemist has unlocked the mighty storehouses of plant food, which have accumulated through the ages and converted them into mixtures which make it possible to produce larger crops than the soil could ever produce.

Thus the vast deposits of

potash in Germany, the nitrate beds in South America, and the tremendous accumulations of phosphate rock in this country and elsewhere have all been made useful to agriculture.

To Develop Soil.

If we investigate the early history of agriculture, we find that from almost the beginning of time certain substances were applied to the soil for the purpose of increasing the crop production, but the commercial use of fertilizers may be said to date back to the time when bones were first applied to the soil and their value as a fertilizer recognized. Fertilizing with bones was first practiced in England, and in 1774 their use in agriculture was first publicly recommended by Hunter, and successful experiments were made with bone dust. About 1814 Alexander von Humboldt called public attention to the use of guano as a fertilizer, which he had seen used by the natives of Peru, and about 1830 Peruvian guano began to be imported into Europe, and a few years after, into the United States. Nitrate of soda began to be employed in England at the beginning of the last century.

It was not until 1840, when Leibig published the book entitled "Chemistry in Its Applications to Agriculture and Physiology," that the true theory of plant nutrition began to be properly understood. Leibig was the first to study the chemical compositions of the ashes of plants and to point out the necessity of supplying crops with mineral food. This led to the expansion of the commercial preparation of manures, which has developed into the commercial fertilizer industry of today, and has reached such large proportions in the past fifty years.

Leibig was the first to recommend the general use of sulphuric acid on bones and mineral phosphates for the purpose of making the phosphoric acid more easily soluble and assimilable. He recognized the value of potash and nitrogen as essential to plant nutrition, and while he advanced some erroneous theories, the fundamental principles remain the same to-day as when first advocated nearly seventy years ago.

South Carolina Rock.

The discovery of the so-called South Carolina rock gave a great impetus to the fertilizer industry in this country, and this has been augmented by the large deposits of phosphate in Florida and Tennessee. It was not until 1860 that the agricultural value of the tremendous deposits of potash salts in Germany became generally known, and now the world's demand is over 3,000,000 tons per annum. Although the fertilizer industry considered in a broad commercial sense is but little over a half-century old, its growth has been tremendous, as will be shown by the following figures taken from the last report of the United States Geological Survey.

The increase in value from 1880 to 1905—a period of only forty-five years—was 5,291 per cent., and the increase in tonnage from 1880 to 1905 was 394.7 per cent. Nearly every year shows an increasing demand over the preceding year, due both to the gradual loss of fertility in our cultivated lands, and a more intelligent and intensive system of farming.

Secretary Wilson gave some interesting statistics of recent address, showing the production of the lands of the United States during a period of forty years. According to his statement, during the first thirty years of this period there was a loss of 8 per cent. in value, but in the last ten years there has been a gain of 14 per cent. This shows that the farmers are learning to conserve the fertility of the soil, and by a judicious system of cultivation and fertilization their lands are becoming more productive.

Address by Dr. Carpenter.

Dr. H. C. Carpenter of Randolph-Macon College delivered an address on "The Recent Return to the Old Alchemistic Belief in the Transmutation of Metals." The alchemists' aim, he said, was to transmute one metal into another, in order that they might convert the base metals into gold. Many of the alchemists were sincere, hard-working chemists, and accomplished much to uphold the science of chemistry. They had many difficulties to overcome, and there was much to mislead them. Then, in the same line of thought, came the modern alchemists, who have been led by his hypothesis that all matter was composed of one substance—hydrogen; that every substance was hydrogen in some different form of combination. If that was true, it should be easy by appropriate means to change any substance into any other, and consequently into gold.

The works of all alchemists went to disprove that hypothesis and to prove that there were a number of separate and distinct elements which could not be broken up into any other elements, and that the conversion of one element into another was impossible.

A few years ago, when radium was discovered, with its many peculiar properties, many jumped to the conclusion that by its aid all chemical problems could be explained. The heat of the sun and of the earth had their origin in radium, etc. By means of it transmutation from one element to another could be effected, it was confidently believed.

There seemed to be good grounds for this latter belief, for a few years ago Professor Ramsay stated that by the action of radium emanation on copper sulphate or copper nitrate, lithium was obtained where none existed before. This statement from such an eminent authority created a great stir in the chemical world, and consternation among some.

Madam Curie, however, decided that the work needed repeating; but before repeating it she examined all of the substances to be used most carefully, to see that no lithium was present. She found that the lithium was in the glass, and in nearly every thing that she would ordinarily use. She finally had to resort to platinum vessels and purified everything she used in the experiments in them, and do all of her work in platinum. After taking every precaution, she repeated Professor Ramsay's experiment, and obtained no lithium at all.

Soon afterwards Mr. E. Permin conducted similar experiments, but obtained no lithium. Therefore it seems that the lithium Professor Ramsay obtained existed in the substances he used as an impurity.

"We therefore come back to firm ground again," he added, "and the possibility of converting the base metals into gold is not a possibility, and our future supply of that metal will have to be mined out of the earth, as it has been done since the advent of mankind."

League Elects Officers.

(Special to The Times-Dispatch.)

WEST POINT, Va., December 19.—At the first meeting of the School Im-

## Rothert & Co.

FURNITURE CARPETS STOVES

FOURTH & BROAD STS., RICHMOND, VA.

## This Store is Showing Many Pretty and Useful Xmas Gifts.

Including:

Morris Chairs, Parlor Chairs, China Cases, Sideboards, Tables, Reed, Leather and Wood Seat Rockers, Rugs, Druggets, Portieres, Lace Curtains.

Three-piece Parlor Suits, from \$7.50 to \$65.00.

Five-piece Suits, \$25.00, \$30.00 and up.

Brass Beds, \$16.50, \$25.00, \$40.00.

Felt Mattresses, \$7.50, \$9.00 and \$12.50.

Portieres, Mantel Mirrors, Clocks, Vases,

Watches, Chairs, Princess Dressers, Dressing

Tables, Parlor Lamps, Hall Lamps.

## Mattings, Carpets, Linoleum.

Smyrna Rug, \$1.49; worth \$2.00.

Ladies' Desks and Combination Cases, Parlor Cabinets, Music Cabinets.

The best Morris Chair in the city for \$5.00.

provement League, Mrs. W. J. Marshall was elected president; Mrs. Herbert L. Lewis, resigning the office.

Masons Hold Meeting.

(Special to The Times-Dispatch.)

WEST POINT, Va., December 19.—Lodge No. 1, A. O. U. M., held a special meeting last night in its hall to receive an official visit from the most worshipful grand master of Masons in Virginia, Dr. Joseph W. Eggleston, of Richmond, District Deputy W. J. Phillips, Mr. C. S. Field and Dr. C. V. Vaughn and Mr. A. Julian Bagby addressed the lodge after an able address by Dr. Eggleston.

The first degree in Masonry was conferred on Mr. Angermann, of West Point. There were many visitors from Richmond and Staunton's lodge. After the work of the evening a social hour was spent.

Want Taft in Raleigh.

(Special to The Times-Dispatch.)

RALEIGH, N. C., December 19.—Much discussion has been heard the past few days of the idea of an invitation being sent from Governor Elbert H. Taylor, of North Carolina, to President-elect William H. Taft for him to come to Raleigh from Augusta, where he is to spend the winter, and deliver an address before the members of the General Assembly. Prominent Democrats in and out of Raleigh believe that such a visit, so much benefit would accrue to the Legislature and the State at large.

PULITZER IN HAMPTON ROADS.

New York Editor is En Route to

(Special to The Times-Dispatch.)

HAMPTON, Va., December 19.—Joseph Pulitzer, editor and owner of the New York World, accompanied by a party of friends, arrived in Hampton Roads, today on the editor's yacht Liberty. Mr. Pulitzer is en route to Panama, where he expects to make an exhaustive examination into the condition of the Panama Canal. He expects to reach the island at the time President-elect William H. Taft will be in the city.

Democracy—Dillon.

(Special to The Times-Dispatch.)

LEESBURG, Va., December 19.—John Demory, of Hillsboro, Loudoun county, and Miss Mary Dillon, of Jefferson county, Va., were married Thursday evening at the residence of H. P. Kline, Charleston, W. Va. The ceremony was performed by the Rev. Dr. A. C. Hopkins, of the Presbyterian Church. They will reside in Loudoun county.

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